THURSDAY, AUGUST 15, 1872

THE BRITISH ASSOCIATION

THE recurrence of our annual Congress of Science naturally leads us to reflect on the position which the British Association occupies in our social economy, and on the part it is qualified and, perhaps, destined to play. Whilst other scientific societies occupy themselves in giving publicity to results and speculations, and in rewarding with their medals successful labours, the British Association alone systematically undertakes to distribute the greater part of its income, about 2,000*l.* per annum, in grants to enable men of science to conduct scientific investigations, and to institute inquiries with a view to possible future action. Stated briefly, this constitutes the broad distinction between the British Association and other scientific societies. As a publishing society it cannot vie with some other bodies, as, for instance, with the Royal Society. The great bulk of the papers it receives are published in abstract and but few *in extenso;* and it allows a greater latitude than other societies with regard to the reception of subjects which have been elsewhere made public, thus constituting its proceedings, to a great extent, a *résumé* of the year's work—a characteristic quite in keeping with its practice of meeting but once a year.

It is distinguished also by the wide range of subjects admissible in its various sections, by the facility with which membership is granted, by its attractiveness to foreign men of science, and, above all, by the tendency which its practice of meeting each year in a different town has to disseminate Science throughout the kingdom.

All these characteristics combine to make the British Association a truly national body. And the feeling that it is so has always made its leaders more ready to interest themselves in large national objects connected with Science, than, as members of other societies, the same men have elsewhere shown themselves to be. The British Association has thus always exhibited more self-assertion, and, in its communications with Government, more boldness, than other societies. In other scientific circles there is a disposition to regard any assistance given by the State as a favour to Science, and a timid reluctance to point out plainly cases in which the aid of the State is really necessary. The total Solar Eclipse of 1871 is a case in point. The Astronomical Society had not the heart to place before the Government a clear statemen of what was required. The duty of doing this, which obviously devolved on that Society, being thus neglected by it, was at once, without a moment's hesitation, successfully performed by the British Association, to the great benefit of knowledge.

But a more striking and far more important example of the wise vigour which has generally characterised its counsels, is afforded by the steps it took to obtain a thorough inquiry through a Royal Commission into the whole condition of scientific action and administration in England. Whether that inquiry leads to immediate reform and expansion of our scientific institutions, as it is generally expected it will, or not, the inquiry itself has already been productive of incalculable good. It will probably be found, when the evidence is published, that our "system" at present consists of a mass of inconsistencies, and deficiencies, of the existence of which not even those who originated the movement could have had any clear idea, much less any reliable proof. The utter absence of any guiding principle in the dealings of successive Governments with Science, and of any system for administering such imperfect and dislocated institutions as we possess, which we are convinced the inquiry must also establish, will so startle all thinking men, whether scientific or not, that sooner or later reform must come, although the causes of this state of things are not far to seek.

Another good result of the inquiry is that it has forced the large body of men of Science who have been examined to turn their attention from that too rapt contemplation each of his own labours to which English philosophers are addicted, towards the great fields which others are cultivating; and by forcing them to regard Science as a whole, to recognise and duly appreciate the individual value and the interdependence of its several parts. The change in scientific thought which has taken place in the course of the two years during which the Royal Commission has been sitting, is quite perceptible to those whose attention is turned to the subject.

But no change of thought is perceptible in the Ministry of the day. It is perfectly clear that now, as ever, any aid given to Science is a mere question of pressure. Sometimes it is yielded with apparent promptitude to the external force of numbers, importunity, or probable popularity. At other times it is as stubbornly refused. An example of each is of recent occurrence. Aid was given to expeditions to observe the two last total Solar Eclipses, in the shape of several thousand pounds, and the use of ships. The aid of 150*l.* was refused to the British Association for completing tidal investigations, on which that body had spent 600*l.* As it is impossible to refer these two acts to one and the same guiding principle, we must assume that different motives prompted each, and that, as no properly instructed mind could consider Eclipse Observations many times more important to a great naval and maritime country than Tidal Researches, compliance with the one demand cannot be set off against refusal of the other in assessing the real regard for Science to be credited to the Government.

These two well-marked cases, the miserable Hooker-Ayrton wrangle, the treatment of the Society of Antiquaries recorded in our last number, and the declaration of Mr. Gladstone at the Royal Society's anniversary dinner that Science must suffer if aided, or as he expressed himself, if "interfered with," by the State, are all indications that the Government do not yet know that it is possible to draw a boundary line separating the regions of scientific activity which should be occupied respectively by individuals or private bodies and by the State. And the truth does not yet seem to have dawned on them that the prolonged neglect of those scientific objects which State resources alone can attain is a positive dereliction of duty, the effect of which in overweighting England in the race of European civilisation is already perceptible.

Our immediate object in drawing attention to the unsettled and phlegmatic views of the Government with

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respect to Science is to raise the question whether the British Association cannot reinforce the healthy tone of thought they have brought about through the Royal Commission obtained by their influence. We believe that this question will be raised in a more formal manner at Brighton; but as it was first suggested in these columns,* we may, without impropriety, give it our advocacy.

It is thought by many that the perplexed and perplexing way in which the relative functions of individual and of State action in Science are now confounded, has its origin in a great measure in neglect of classification on the part of private persons and private bodies. And the opinion is spreading widely that the British Association itself has not sufficiently discriminated, in distributing its funds, between objects which individuals are perfectly able to compass, and which they should be encouraged to undertake, and those which the State alone can successfully grapple with, and which, by reason of their evident importance to the community at large, the State is therefore bound, as a matter of duty, effectively to provide for.

We shall not here attempt to indicate the tests by which these two classes of scientific objects may be distinguished. If the principle be but admitted that a distinction does exist, the necessary rules for enforcing it may safely be left to the wisdom of the Association to draw up. Its experience is very wide, and its records will supply ample materials for ascertaining what are the purposes which, with the best intentions, it has been unable to attain, and on which its grants have been virtually wasted. These will afford data sufficient for the construction of a code of rules applicable to almost every case that can come before it.

The next question is, how should these tests be applied? We are satisfied that the time has arrived when the Association may with perfect propriety, and with the certainty of the most beneficial consequences, decline to allot any portion of its funds to purposes which should by rights be undertaken by Government. We are far from counselling this step as a retaliation for such refusals of State help as that respecting, for instance, the tides. Any such feeling would be quite unworthy of such a body as the British Association. Its grounds for doing as is proposed would be perfectly clear, and entirely free from any suspicion of antagonism or irritability. First, many of the objects which the Association has attempted to attain have been distinctly proved to be too large for its resources, and to require official machinery which it cannot command. The question of Sewage is a marked example of this class. But the fact that the Association has taken up such a subject leads to the mistaken belief that it is properly provided for; and it is not till some years have elapsed that the truth breaks upon us that the time and money expended upon it have been almost wholly wasted, and that the question remains pretty much in its original condition—not appreciably advanced. The attempt to deal with such problems with insufficient means results, therefore, in delusion and delay. Secondly, to deal with all classes of scientific questions without discrimination, perpetuates and deepens the obscurity which prevails in England as to the duties of the State. No one has yet been bold enough to maintain that the State should do nothing whatever for Science, and that what is at present done should be discontinued; but scarcely any one seems to have a clear idea of the principles on which such duties should be defined, and on which expansion should proceed. If once such a definition is arrived at, the main difficulty will have been overcome. If it is once settled by competent authorities that certain inquiries, or experiments, or observations, should, by reason of their expensiveness, of their value to the community, or of the length of time they must occupy, be undertaken by Government, the first step will have been taken towards that organisation of State Science which it is clear must not be much longer delayed.

Now, there can be no more practical mode of arriving at such a definition than that of firmly refusing to apply private funds to public purposes, as here proposed. There will at first be some difficulty in effecting the necessary classification, and it will be well not to apply it at the outset too rigorously; but by degrees the difficulty will vanish, and it will be as easy to say what subjects devolve on the State as it now is to say what subjects appertain to particular sections of the Association.

Another great advantage which will ensue will be the amount of funds thus set free for assisting those objects which can be effectually attained by individual enterprise, the number of which is very great. It is well known, and much to be lamented, that many of these invaluable undertakings are starved for want of those very funds which are now spent in the vain endeavour to do the State's work.

The subjects which the Association may thus pronounce to be not within its province should not be lost sight of. An enumeration of them should be submitted annually to Government, and the resulting action taken on them by Government should be regularly reported to the Association and published. The effect of this would be to assist the Government in arriving at some measure of the scientific work which must be done by them, if done at all. This will soon be shown to be enormous in extent and variety. Attention will next be called to the machinery existing for such purposes. The first question will be, If such and such investigations are to be undertaken, which department shall be made responsible for them? And this must bring out prominently the absurdity of our present arrangements, whereby the various scientific institutions of the State are scattered amongst the various departments, and must lead to what is the fundamental requisite—concentration of all such institutions under one department responsible for the whole.

Nothing that the Association can do would, in our opinion, conduce so directly to this desired end as the classification of the applications made to them for funds in aid. The object is one in strict keeping with its traditions, and quite worthy of its ambition, destined as it is to be the High Court of Appeal in Science, and the prime mover in all that concerns material and philosophical progress. In the present day no considerable measure is undertaken by the State except in obedience to an impulse from without. This will clearly be the case with respect to Science. The first impulse has been given already by the British Association. We foresee that the issue will depend materially on the persistent firmness with which its first efforts are followed up by that powerful and useful body. Success must crown them at last, and sooner perhaps than some at present anticipate.

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* *Vide* "The Tides and the Treasury," June 27, 1872. No. 139, vol. vi.

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